

***The Institution of Engineers, Australia: Sydney Division
Engineering Heritage Committee***

Oral History Program: Biographical Notes

**John Gilmore NUTT AM (1934 -)
Consulting Civil Engineer**

Birth & Family: Born 19 August 1934, Townsville, North Queensland. Father was an engineer and surveyor in private practice. In 1957, married Roberta, and had five children. One sister, retired physiotherapist living in Sydney.

Education Cremorne Public School, then Townsville Central State School. Townsville Grammar School for 2 years, then to boarding school at Toowoomba for 2 years. University of Queensland, Civil Engineering degree, 1951-1954

Qualifications: Bachelor of Engineering, University of Queensland
Doctor of Philosophy, University of Manchester, England 1959

Memberships: Fellow, Institution of Engineers, Australia 1960, 1975
Member, Institution of Civil Engineers, UK, 1962

Member, Association of Consulting Engineers, Australia 1968

Fellow, Royal Society of Arts, 1988

Fellow, Institution of Structural Engineers, UK, 1990

Member and Chairman, Australian Standards and Loading Committee, 1964-1978

Chair, the Australian Building and Regulations Review Task Force, 1989-1991

Chairman of the Fire Code Reform Centre Ltd

Member, Austrade Working Group for Construction Industry Export

Member, UTS Civil Engineering Advisory Committee

Awards: UK Institution of Structural Engineers Special Award 1972

Association of Consulting Engineers Award of Excellence 1973

President's Award, Royal Australian Institute of Architects, NSW 1991

American Institute of Architects Honor Award 1992

Member, Order of Australia, for services to engineering, 1992

Doctor of Science (Honoris Causa), Macquarie University 1995

The Institution of Engineers, Australia: Peter Nicol Russell Medal 1999

Work History: Following graduation in 1955, Nutt worked as a demonstrator in Geotechnical Engineering at King's College, University of Queensland, whilst studying advanced maths. This also involved consulting work for outside projects, which developed his geotechnical engineering skills.

Lecturer John Lavery encouraged Nutt to improve his skills and confidence through overseas experience.

Nutt became Assistant Lecturer in the Department of Civil Engineering at Manchester University in 1956, while working on his PhD on instability and buckling of steel structures and plastic methods of collapse. His research was aided by the pioneering computer work in Manchester at that time. Nutt studied the interaction between collapse and instability, and associated predictions. Graduating in 1959, Dr Nutt then taught structures and computer applications at Manchester for 12 months.

In 1960 he became Project Engineer for engineering consultants, Ove Arup & Partners (UK) for the Barbican Redevelopment in London, which involved research into acoustics and the effects of wind on high-rise structures. In 1961 he started work with a team from Arups on the shell roof concept and design problems of Sydney Opera House, to define a geometry to mathematically model Utzon's shapes. Triangular rib support for the shells evolved with the concept of precasting concrete from a sphere shape, which allowed for repetition without renewing expensive formwork. According to Nutt, the Opera House represented a symbiotic relationship between architects and engineers. It was "*a computer building using techniques of prestressing, the use of epoxy resins and ferro cement in the tile lids*". Dr Nutt moved back to Australia in 1963

In 1965 Ove Arup established a practice in Australia, which over time was transferred into ownership by its Australian staff at no cost to them. Dr Nutt became a partner in 1968, and Chairman in 1973.

The Australasian practice grew to a staff of 400 with 9 offices in four countries. Dr Nutt and Arups in partnership with the best Australian architects, have been responsible for many well known projects such as architectural masterpieces in Australia and overseas, and have won many domestic and international awards.

Important projects for Arups following the Opera House, included the timber Food Services Building in Woden, Canberra in the mid 60s. Dr Nutt researched timber to design its long span flexible roof using light-weight triangular beams.

Dr Nutt specialised in the design and analysis of high rise buildings, with his major projects in Sydney including the Governor Phillip Tower, Angel Place Redevelopment (not built at the time of interview), Sheraton on the Park Hotel, 1 O'Connell Street, 1 Macquarie Place, State Bank Head Office, National Bank House, Westpac Plaza, Barclays Building, and Overseas Passenger Terminal, Sydney Cove. Other major projects include the National Parliament House of Papua New Guinea, National Bank House, Melbourne and the Barbican Centre, London.

In addition to his work with Arups, Dr Nutt participated in many advisory committees such as the Australian Standards and Loading Committee from 1964-1978 as member and Chairman, which removed some great anomalies and deficiencies. His work as member of an Austrade Working Group for Construction Industry Export led to the establishment of a construction industry body, the Australian International Projects Group, and the setting up of the Australian Infrastructure Export Fund by the Australian Government.

Nutt lectured on practice matters at various universities, and in 1993 the Vice Chancellor of the University of Queensland, his alma mater, appointed Dr Nutt Chairman of a University Committee to review the

performance and the strategic plans of the Civil Engineering Department.

In 1991 he received the President's Award of the NSW Chapter of the Royal Australian Institute of Architects with colleague Peter Thomson, *'recognising the outstanding contribution to architects of John Nutt and Peter Thompson and their firm.'* In 1992 Dr Nutt was made a Member of the Order of Australia for *'services to engineering'*.

Following his retirement in July 1999, Dr Nutt was involved in the Rotary Club of Sydney Community Services Committee, University of Technology, Sydney and fire engineering research.

Prepared by Linda Windley, 4 February 2003, from an oral history interview conducted on 17 February 2002